

AGENDA

DOE/NETL's

Mercury Control Technology Conference

Hilton Pittsburgh Hotel
Pittsburgh, PA
December 11-13, 2006



MONDAY, December 11, 2006

7:00 AM **Registration**

Overview

8:00 AM **Introduction**

*Charles E. Miller, U.S. Department of Energy,
National Energy Technology Laboratory*

8:05 AM **Welcome**

*Joseph Strakey, Associate Director, Office of Coal and Power R&D,
U.S. Department of Energy, National Energy Technology Laboratory*

8:20 AM **Overview of DOE/NETL Mercury R&D Program**

*Thomas J. Feeley III, Product Manager, Innovations for Existing Plants,
U.S. Department of Energy, National Energy Technology Laboratory*

8:35 AM **To be Determined**

*Ravi Srivastava, Technical Advisor, Sector Policies and Programs Division,
U.S. Environmental Protection Agency Office of Air Quality Planning and Standards*

8:55 AM **EPRI's Perspective on Mercury Control Technology for Coal-Fired Power Plants**

George Offen, Technical Executive, Electric Power Research Institute

9:15 AM **Status, Trends and Developments in Emission Legislation
and Control for Mercury Outside the USA**

Dr. Lesley Sloss, Senior Environmental Consultant, IEA CCC, London, UK

9:35 AM **Break/ Posters on Display**



U.S. Department of Energy • Office of Fossil Energy
National Energy Technology Laboratory



Sorbent Injection

- 10:00 AM **Evaluation of Sorbent Injection for Mercury Control**
Sharon Sjostrom, ADA-ES, Inc.
- 10:30 AM **Sorbent Injection for Small ESP Mercury Control**
Carl Richardson, URS Group, Inc.
- 11:00 AM **Demonstration of Amended Silicates for Mercury Control**
James Butz, ADA Technologies, Inc.
- 11:30 AM **Enhancing Carbon Reactivity in Mercury Control Lignite-Fired Units**
Michael Holmes, University of North Dakota Energy & Environmental Research Center
- 12:00 Noon **Lunch**
- 1:00 PM **Advanced Utility Mercury Sorbent Field Testing Program**
Sid Nelson, Sorbent Technologies, Inc.
- 1:30 PM **Field Demonstration of Enhanced Sorbent Injection for Mercury Control**
Shin Kang, ALSTOM, Inc.
- 2:00 PM **Low Cost Options for Moderate Levels of Mercury Control**
David Muggli, ADA-ES, Inc.
- 2:30 PM **Break/ Posters on Display**
- 3:00 PM **Brominated Sorbents for Small Cold-Side ESPs, Hot-Side ESPs, and Fly Ash Use in Concrete**
Sid Nelson, Sorbent Technologies, Inc.
- 3:30 PM **DOE/NETL's Phase II Mercury Control Technology Field Testing Program, Preliminary Economic Analysis of Activated Carbon Injection**
Andrew Jones, Science Applications International Corporation
- 4:00 PM **PANEL DISCUSSION- Impacts of High SO₃ and Balance-of-Plant Issues Associated with Sorbent Injection**
- 5:00-6:00 PM **POSTER SESSION**
(Posters on display all day, presenters available during 5:00- 6:00 PM Poster Session)

POSTERS

New 2006 Phase III Mercury Field Testing Projects

Long-Term Carbon Injection Field Test for >90% Mercury Removal for a PRB Unit with a Spray Dryer and Fabric Filter

Sharon Sjostrom, ADA Environmental Solutions, Inc.

Demonstration of Mer-Cure Technology for Enhanced Mercury Control

Shin Kang, ALSTOM Power, Inc.

Full-Scale Field Trial of the Low Temperature Mercury Capture Process

Dick Winschel, CONSOL Energy, Inc.

Evaluation of Control Strategies to Effectively Meet 70-90% Mercury Reduction on a Eastern Bituminous Coal, Cyclone Boiler with SCR

Jean Bustard, ADA Environmental Solutions, Inc.

Mercury Control For Plants Firing Texas Lignite and Equipped with ESP-wet FGD

Carl Richardson, URS Group, Inc.

Full-scale Testing of a Mercury Oxidation Catalyst Upstream of a Wet FGD System

Gary Blythe, URS Group, Inc.

Advanced Mercury Sorbents with Low Impact on Power Plant Operations

Kevin Fisher, Apogee Scientific, Inc.

Utilization of Partially Gasified Coal for Mercury Removal

Vitali Lissianski, GE Energy and Environmental Research Corporation

On-Site Production of Mercury Sorbent with Low Concrete Impact

Dave Thompson, Praxair, Inc.

Pilot Testing of WRI's Novel Mercury Control Technology by Pre-Combustion

Thermal Treatment of Coal

Alan Bland, Western Research Institute

Sorbent Injection

High Temperature Sorbents for Capture of Mercury

Evan J. Granite, Christina Myers, and Hank Pennline,

U.S. Department of Energy, National Energy Technology Laboratory

Large-Scale Testing of Enhanced Mercury Removal for Subbituminous Coals

Jason Laumb, University of North Dakota Energy & Environmental Research Center

Mercury Control Technologies for Electric Utilities Burning Lignite Coal

John Pavlish, University of North Dakota Energy & Environmental Research Center

Sorption Mechanisms for Mercury Capture in Warm Post-Gasification Gas Clean-up Systems

Paul Blowers, University of Arizona

Oxidation of Mercury

Review of Catalysts for Oxidation of Mercury in Flue Gas

Albert Presto and Evan Granite, U.S. Department of Energy

National Energy Technology Laboratory

Novel Catalysts for Oxidation of Mercury in Flue Gas

Evan Granite, Hank Pennline, and Albert Presto,

U.S. Department of Energy, National Energy Technology Laboratory

Effect of Flue Gas Components on the Oxidation of Mercury by Gas Oxidants

Ted Chang and N. Yang, Lawrence Berkeley National Laboratory

Mercury Chemistry in Flue-Gas Treatment Systems

C. David Livengood, Argonne National Laboratory

Survey of Scrubber Additives for Mercury Retention

Albert Presto and Evan Granite, U.S. Department of Energy

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Oxidation of Mercury in Products of Coal Combustion

Heng Ban, University of Alabama

Environmental Studies on Mercury

Mercury Risk Assessment II

Terry Sullivan, Brookhaven National Laboratory

Evaluation of the Emissions, Transport, and Deposit of Mercury, Arsenic, and Fine Particulate Matter from Coal Based Power Plants in the Ohio River Valley Region

Kevin Crist, Ohio University

Direct Measurement of Mercury Reactions in Coal Power Plant Plumes

Leonard Levin, Electric Power Research Institute

Fate of As, Se, and Hg in a Passive Integrated System for Treatment of Fossil Plant Wastewater

Terry Yost, TVA

Mercury in CUBs

Mercury Flux in Coal Utilization Byproducts

Don Martello and Natalie Pekney, U.S. Department of Energy

National Energy Technology Laboratory

TUESDAY, December 12, 2006

7:00 AM **Registration**

Byproduct Characterization/Management

8:00 AM **To be Determined**

Invited- Frank Princiotta, U.S. Environmental Protection Agency

8:30 AM **Mercury and Air Toxic Element Impacts of Coal Combustion Byproduct Disposal and Utilization**

Debra Pflughoeft-Hassett,

University of North Dakota Energy & Environmental Research Center

- 9:00 AM **Fate of Mercury in Synthetic Gypsum Used for Wallboard Production**
Jessica Sanderson, USG Corporation
- 9:30 AM **Leach Testing of FGD Materials**
Candace Kairies, U.S. Department of Energy
National Energy Technology Laboratory
- 10:00 AM **Break**
- 10:30 AM **Characterization of Coal Utilization Byproducts from Mercury Control Field Testing**
Carl Hensmann, Frontier GeoSciences, Inc.
- 11:00 AM **PANEL DISCUSSION- Mercury in CUBS**
- 12:00 Noon **Lunch**

Mercury Oxidation and Co-Removal with FGD Systems

- 1:00 PM **A Comparison of SCR Catalysts for Mercury Oxidation**
Tom Gale, Southern Research Institute
- 1:30 PM **Large-Scale Mercury Control Technology Testing for Lignite-Fired Utilities, Oxidation Systems for Wet FGD**
Steven Benson, University of North Dakota Energy & Environmental Research Center
- 2:00 PM **Pilot Testing of Mercury Oxidation Catalysts for Upstream of Wet FGD Systems**
Gary Blythe, URS Group, Inc.
- 2:30 PM **Break**
- 3:00 PM **Evaluation of Mercury Emissions from Coal-Fired Facilities with SCR-FGD Systems**
Jeffrey Withum, CONSOL, Inc.
- 3:30 PM **Bench Scale Kinetics Study of Hg Reactions in FGD Liquors**
Gary Blythe and David DeBerry, URS Group, Inc.
- 4:00 PM **Field Testing of a Wet FGD Additive for Enhanced Mercury Control**
Gary Blythe, URS Group, Inc.

WEDNESDAY, December 13, 2006

- 7:00 AM **Registration**

Other Mercury Control Technology

- 8:00 AM **Demonstration of an Integrated Approach to Mercury Control at Coal-Fired Stations**
Vitali Lissianski, GE-EERC
- 8:30 AM **Field Testing of Mercury Control at TXU's Big Brown Station**
John Pavlish, University of North Dakota Energy & Environmental Research Center
- 9:00 AM **Long-Term Demonstration of Sorbent Enhancement Additive Technology for Mercury Control**
Jason Laumb, University of North Dakota Energy & Environmental Research Center
- 9:30 AM **Evaluation of MerCAP for Power Plant Mercury Control**
Carl Richardson, URS Group, Inc.
- 10:00 AM **Break**
- 10:30 AM **The Thief™ Process for Mercury Removal from Flue Gas**
*Evan Granite, U.S. Department of Energy
National Energy Technology Laboratory*
- 11:00 AM **The PCO Process for Photochemical Removal of Mercury from Flue Gas**
*Evan Granite, U.S. Department of Energy
National Energy Technology Laboratory*
- 11:30 AM **CFD Modeling for Mercury Control Technology**
Jens Madsen, Fluent Technologies
- 12:00 Noon **Lunch**
- 1:00 PM **Toxecon Retrofit for Mercury and Multi-Pollutant Control**
Steve Derenne, WE Energies
- 1:30 PM **A Comparison of Different Mercury Measurement Techniques in a RATA Format**
Denny Laudal, University of North Dakota Energy & Environmental Research Center
- 2:00 PM **PANEL DISCUSSION- Technical Performance and Cost of Mercury Control Technology other than Sorbent Injection**
- 3:00 PM **Wrap-Up**
*Lynn Brickett, U.S. Department of Energy
National Energy Technology Laboratory*